

Application No.: 10/772,510
Filed: February 5, 2004
Amendment dated: June 5, 2007
Reply to Office Action of February 5, 2007

c) Remarks

Specification was amended to correct typographical errors pointed out by the Examiner and to include in the description of Fig. 3 numeral 16. In view of the amendment of the Specification, reconsideration and withdrawal of the objection to the drawings are respectfully requested.

The Examiner is thanked for his careful consideration of the claims which is reflected in his claim objections set forth on pages 3 - 5 of the Official Action. The claims have been editorially revised to avoid the informalities identified by the Examiner.

Claims 1-34 are pending in this application. Claims 3-16 have been amended in various particulars as indicated hereinabove. New Claims 27-34 have been added to alternatively define the invention. Claims 17-26 have been cancelled without prejudice or disclaimer. The amendments are supported by the application as originally filed. Therefore, no new matter is added.

Turning first to the Office Action Summary Sheet, Claims 1-26 are pending in this application. Claims 1-26 are rejected. Claims 1, 8, 13, 17 and 26 are objected to. The specification is objected to. The drawings are objected to.

Turning now to the merits, Claims 1, 8, 13, 17 and 26 were objected to because of informalities. Claims 8, 13, were rewritten to overcome these informalities.

Claims 6, 7, 12, 14, 16, 22 and 23 were rejected under 37 CFR 1.75(a) as failing to particularly point out and distinctly claim the subject matter which applicant regards as his invention or discovery. This rejection is respectfully traversed for the following reasons. Claims 6, 7, 12, 14, 16 were rewritten to overcome informalities mention by the Examiner. Claims 22 and 23 were canceled.

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Claims 3, 4, 11, 14, 19 and 20 were rejected under 35 U.S.C. 112, second paragraph. It is believed that the present amended Claims are in compliance with 35 U.S.C. 112, second paragraph.

Claims 17-26 were rejected under 35 U.S.C. 101. Claims 17-26 has been canceled without prejudice.

Claims 1, 2, 3, 5, 8, 11, 13, 15, 17, 18, 19, 21, 24 and 26 were rejected under 35 U.S.C. 103(a) over the combination of Shibata et al. (US2002/0089664) and Park (US 6,432,800). This rejection is respectfully traversed for the following reasons.

For an obviousness rejection to be proper, the Patent Office must meet the burden of establishing a prima facie case of obviousness. The Patent Office must meet the burden of establishing that all elements of the invention are disclosed in the cited publications, which must have a suggestion, teaching or motivation for one of ordinary skill in the art to modify a reference or combined references.¹ The cited publications should explicitly provide a reasonable expectation of success, determined from the position of one of ordinary skill in the art at the time the invention was made.²

Claims 1 and 2 were canceled and rewritten as new independent claim 27. New claim 27 is directed to a method for analyzing a patterned semiconductor wafer, wherein a specific number of dice are exposed with one "stepper area window" (SAW) using an identical mask to expose the patterned semiconductor wafer with a plurality of SAWs, comprising the following steps. Dividing the SAW in a plurality of logical SAW segments; initializing in a learning phase an image field of a camera, wherein the image field of the camera is divided by way of an interactive control system into a plurality SAW image field segments in such a way that after a definable interval of acquired image

¹ *In re Sang Su Lee*, 277 F.3d 1338, 61 USPQ2d 1430 (Fed. Cir. 2002).

² *In re Fine*, 5 U.S.P.Q.2d 1596, 1598 (Fed. Cir. 1988); *In re Wilson*, 165 U.S.P.Q. 494, 496 (C.C.P.A. 1970);

Amgen v. Chugai Pharmaceuticals Co., 927 U.S.P.Q.2d, 1016, 1023 (Fed. Cir. 1996);

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fields a repetition of an identical allocation of imaged SAW image field segments occurs; allocating the logical SAW segments to image field segments, in such a way that as the camera travels over the wafer an identical allocation of logical SAW segments to image field segments occurs at a definable travel interval and image interval; moving the camera with the image field relative to the wafer and thereby acquiring a plurality of images wherein the plurality of images cover the entire wafer; digitally storing the acquired images; and carrying out comparison operations in run phases, in which the image field segments of images that have an identical allocation of image field segments to imaged SAW segments are compared with one another and with a specific master.

Shibata et al. (US2002/0089664) teaches that "invention acquires the image of the sample that has high contrast both in large and fine pattern parts by using an optical system for coaxial bright field epi-illumination, forming the optical image of the sample with various transmission ratio of 0-th order diffracted light that is reflected regularly from the sample, and capturing the image by an image sensor. Further, it is possible to set optical conditioning automatically and in a short time by detecting a plurality of optical images of the sample under various conditions for the transmission ratio of the 0-th order diffracted light, evaluating quality of the detected images, and determining the transmission ratio of the 0-th order diffracted light showing the maximum defect detection sensitivity" (abstract of Shibata et al.).

The present claimed invention as defined by amended claim 27, 28 is patentable over Shibata et al because the reference does not disclose, teach or suggest "initializing in a learning phase an image field of a camera, wherein the image field of the camera is divided by way of an interactive control system into a plurality SAW image field segments in such a way that after a definable interval of acquired image fields a repetition of an identical allocation of imaged SAW image field segments occurs; allocating the logical SAW segments to image field segments, in such a way that as the camera travels over the wafer an identical allocation of logical SAW segments to image field segments occurs at a definable travel interval and image interval; moving the camera with the image field relative to the wafer and thereby acquiring a plurality of images wherein the plurality of images cover the entire wafer; " as in the

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present invention in new claims 27, and 28.

Park (US 6,432,800) teaches moving camera over a wafer but does not disclose, teach or suggest moving camera "as the camera travels over the wafer an identical allocation of logical SAW segments to image field segments". For these reasons, the combination of Shibata et al and Park don't teach all features of the present invention. Claims 3-12 are dependent on claim 27 and are patentable over the cited references in view of their dependence on claim 27 and because the references do not disclose, teach or suggest each of the limitations set forth in claims 27, 28.

Claims 4 and 20 were rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Shibata and Park as applied to claims 2 and 19 above, and further in view of Kuwabara (US 6,643,394).

Claims 6, 12, 16 and 22 were rejected under 35 U.S.C. 103(a) over the combination of Shibata and Park as applied to claim 11 above, and further in view of Yonezawa (US 6,222,624). Claim 22 has been canceled. For the reasons presented above with regard to Claim 27, its dependent Claim 6 and 12 are allowable. For the reasons presented above with regard to Claim 13, its dependent Claim 16 is allowable.

Claims 7 and 23 were rejected under 35 U.S.C. 103(a) over the combination of Shibata and Park as applied to claims 1 and 17 above, and further in view of Bishop et al. (US 5,119,434). Claim 23 was canceled. Claim 7 depends off Claim 27 and should be allowance for the reasons resented above with regard to Claim 27.

Claim 9 was rejected under 35 U.S.C. 103(a) over the combination of Shibata and Park as applied to claim 1 above, and further in view of Park. Claim 9 depends off Claim 27 and should be allowance for the reasons resented above with regard to Claim 27.

Claims 10 and 25 were rejected under 35 U.S.C. 103(a) over the combination of Shibata and Park as applied to claims 1 and 17 above, and further in view of Lin et al. (US 6,292,260). Claim 25 was canceled. Claim 10 depends off Claim 27 and should be allowance for the reasons resented above with regard to Claim 27.

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Claim 14 was rejected under 35 U.S.C. 103(a) over the combination of Shibata and Park as applied to claim 13 above, and further in view of Kuwabara and Ramakrishna et al. ("File Organization...", ACM Transactions on Database Systems). Claim 14 depends off Claim 13 and should be allowance for the reasons resented above with regard to Claim 13.

Applicant believes that the present application is in condition for allowance. A Notice of Allowance is respectfully solicited. Should any questions arise, the Examiner is encouraged to contact the undersigned.

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